



Resource Adequacy Engagement Workshop

June 13, 2022

1 p.m. to 4 p.m.

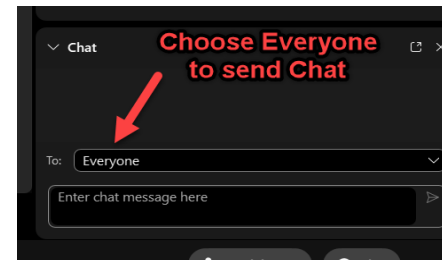
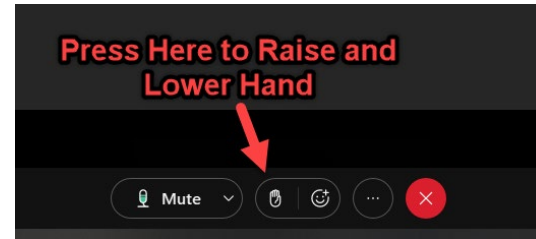


Welcome to the Resource Adequacy Engagement Workshop:

The meeting will begin momentarily

Meeting Participation and How to Ask Questions:

- After you join the WebEx Event, you will not be able to unmute yourself until the host recognizes and unmutes you.
- **To be recognized for asking a question:**
 1. Use the “Raise your Hand” option to signal you have a question
 2. Or use the Chat option to send a question request to “Everyone”
- When finished the Host will re-mute you. Please remember to re-mute and **lower your hand** when done speaking.
- **Participants on the phone:**
 1. ‘*3’ to raise hand and lower hand



Agenda

Time	Topic	Presenter
1:00 – 1:10 p.m.	Safety Moment and Introduction	Russ Mantifel
1:10 – 1:20 p.m.	WRAP Updates	Russ Mantifel
1:20 – 1:35 p.m.	Metrics Review	Steve Bellcoff
1:35 – 2:15 p.m.	Transmission	Eddie Elizeh
2:15 – 2:30 p.m.	BREAK	
2:30 – 3:10 p.m.	NLSL and AHWB Unspecified Resources	Steve Bellcoff, Emily Traetow, Tim Johnson
3:10 – 3:50 p.m.	Consideration of Customer Feedback	Mai Truong, Eddie Elizeh, Ryan Egerdahl, Steve Bellcoff, Tim Johnson
3:50 – 4:00 p.m.	Questions and Next Steps	Russ Mantifel



Safety Moment and Introduction

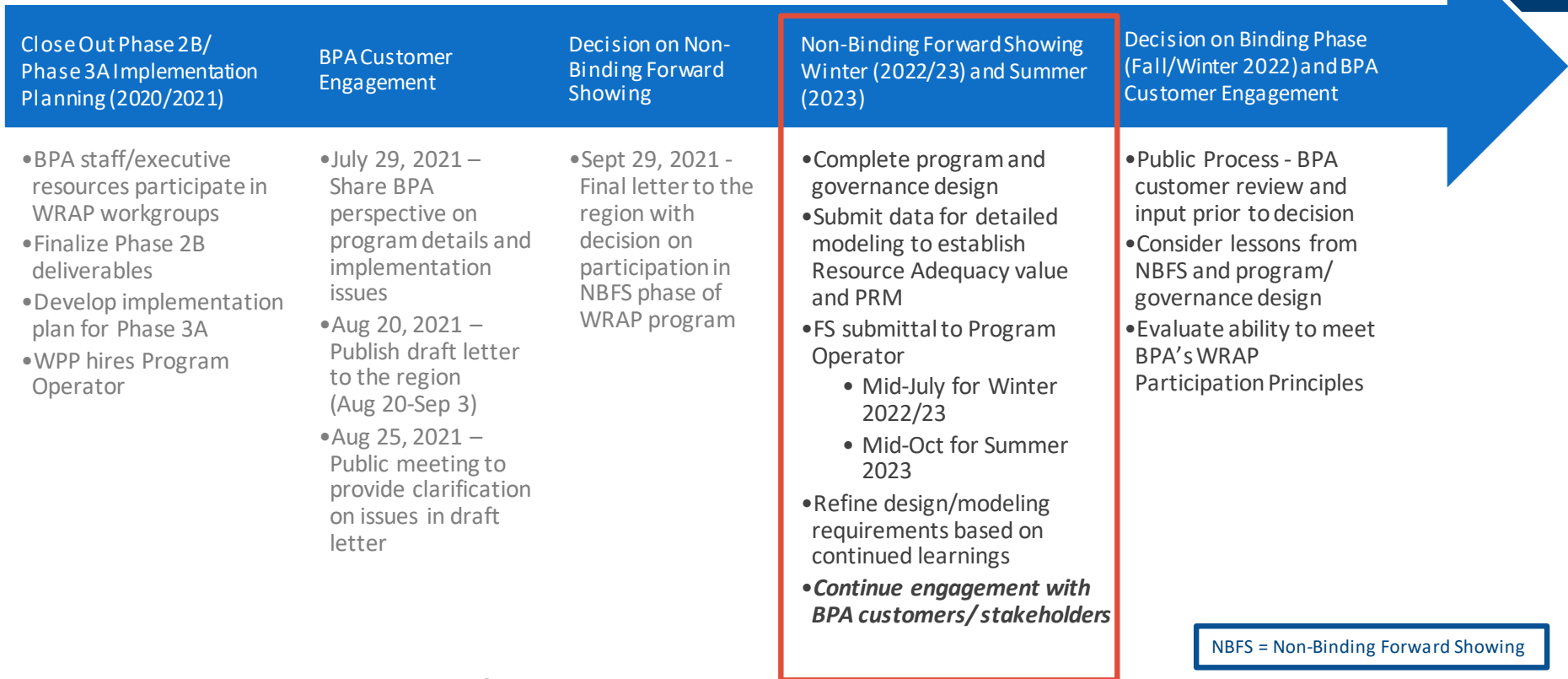
Russ Mantifel



Safety While Walking

- Stay safe as a pedestrian when walking:
 - Whenever possible, walk on the sidewalk; if no sidewalk is available, walk facing traffic
 - Follow the rules of the road, obeying all traffic signs and signals
 - Cross streets at crosswalks
 - If no crosswalk is available and your view is blocked, move to a place where you can see oncoming traffic
 - Look left, right and left again before crossing the street, making eye contact with drivers of oncoming vehicles to make sure they see you
 - Stay alert – avoid cell phone use and wearing earbuds
 - Avoid alcohol and drug impairment when walking
 - Wear bright and/or reflective clothing, and use a flashlight at night
 - Watch for cars entering or exiting driveways or backing up in parking lots
 - Children younger than 10 should cross the street with an adult

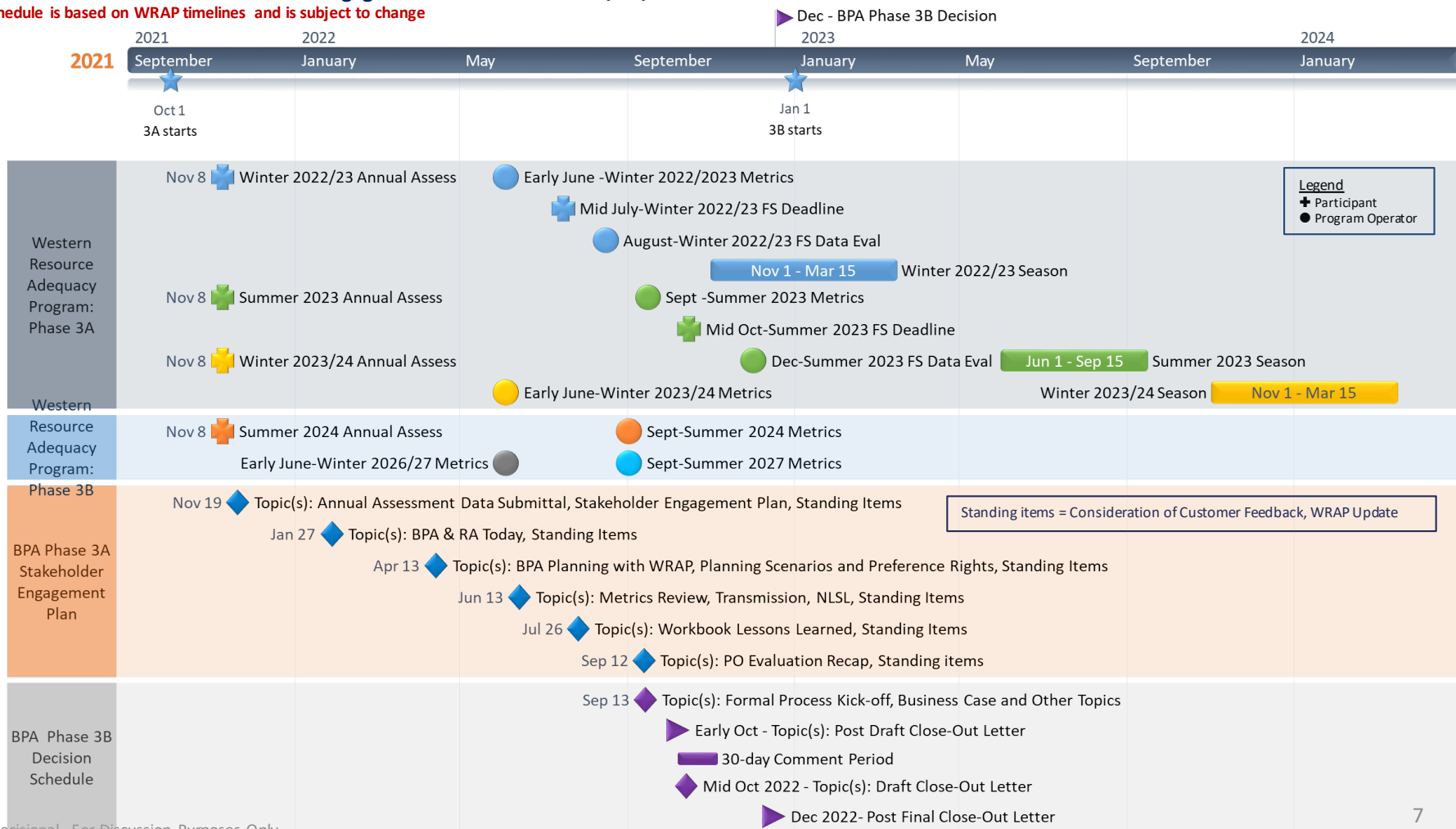
BPA Milestones – 3A Engagement



NBFS = Non-Binding Forward Showing

Tentative BPA Phase 3A Stakeholder Engagement Schedule – as of 06/06/2022

Schedule is based on WRAP timelines and is subject to change



Legend
 + Participant
 ● Program Operator

Standing items = Consideration of Customer Feedback, WRAP Update

Western Resource Adequacy Program

Participation Principles for Binding Program

1. BPA's participation is consistent with its statutory, regulatory and contractual obligations.
2. BPA will maintain reliable delivery of power and transmission to its customers.
3. BPA's participation is consistent with a sound business rationale.
4. BPA's participation is consistent with the objectives of Bonneville's Strategic Plan.
5. BPA's evaluation of WRAP participation includes transparent consideration of the commercial and operational impacts on its products and services.



WRAP Update

Russ Mantifel



Western RA Program Updates

- **Technical Design**
 - Design task forces working through outstanding design elements from Phase 2B. Approved task force proposals can be found on the WPP website.
 - Advanced assessment modeling is being finalized and QCC values have been provided to each Phase 3A participant.
 - Forward showing deadline for winter 2022/23 is mid-July 2022.
- **Governance**
 - Filing with FERC is expected in summer 2022.
 - Public webinar will be scheduled in summer 2022 for discussion/questions on the Tariff.
- **WRAP Engagement Opportunities & More Information**
 - WPP hosting on-going public webinars.
 - See WPP website for information on the public webinars, approved task force proposals, video overviews and the latest WRAP updates @ <https://www.westernpowerpool.org/>
 - Contact at wrap@westernpowerpool.org to be added to WRAP mailing list.



Metrics Review

Resource QCC - DRAFT Results

Steve Bellcoff



Phase 3A – Initial Data Submittal

- **Advanced Assessment - Purpose:**
 - Provide the initial data that will be used in the performance of Loss of Load Expectation (LOLE) assessment and Qualifying Capacity Contribution (QCC) assessments.
 - BPA's initial data shared at the November 19, 2021 RA engagement workshop.

Phase 3A – Draft Metrics

- **Resource QCC:**
 - Storage Hydro
 - Run of River
 - VER
 - Thermal
- **Planning Reserve Margin:**
 - TBD (modeling underway)

Storage Hydro Resources

- **Definition:**
 - Storage Hydro – hydro resource with one hour or greater of storage, not in coordination with another project.
- **QCC Methodology:**
 - Customized WRAP Storage Hydro Methodology for determining the QCC of storage hydro projects in the Western RA Program. The methodology considers 10 years of each resource’s actual historic output (2011 – 2020), water in storage, reservoir levels, and both power and non power constraints.
- **Submitted Data:**
 - Project details, such as: name, host BA, ownership (or contracted Percentage), state, and county
 - Individual monthly QCC values that resulted after applying WRAP Storage Hydro Methodology to historical data.
 - 21 Federal projects submitted as Storage Hydro

Storage Hydro Resources - QCC

Draft Results

Resource Type	Project	Winter					Summer			
		Nov	Dec	Jan	Feb	Mar	Jun	Jul	Aug	Sep
Regulated Hydro										
Storage Hydro	Albeni Falls	8	10	10	12	15	35	33	38	39
Storage Hydro	Bonneville ^{e/}	954	894	899	942	919	636	726	688	764
Storage Hydro	Chief Joseph	2262	2230	2288	2258	2087	2239	2305	2258	1783
Storage Hydro	Dworshak	336	436	440	439	428	443	442	441	439
Storage Hydro	Grand Coulee / GCL Pumping	4385	4750	5029	4590	4665	5158	5245	5847	5709
Storage Hydro	Hungry Horse	234	228	226	211	297	303	303	303	303
Storage Hydro	Ice Harbor	408	391	416	429	476	210	166	157	342
Storage Hydro	John Day	1918	1902	1857	1831	1863	1275	1245	1277	1294
Storage Hydro	Libby	583	574	479	447	419	585	589	414	415
Storage Hydro	Little Goose	687	647	744	742	690	278	278	270	465
Storage Hydro	Lower Granite	687	593	621	681	707	295	267	194	416
Storage Hydro	Lower Monumental	362	404	404	387	459	248	207	145	240
Storage Hydro	McNary	977	986	998	978	972	603	577	567	738
Storage Hydro	The Dalles	1592	1540	1586	1518	1510	808	810	795	1218
Independent Hydro										
Storage Hydro	Cougar	24	18	19	25	25	28	28	28	28
Storage Hydro	Detroit	102	98	98	106	110	92	110	91	110
Storage Hydro	Green Peter	83	80	80	88	90	90	90	74	71
Storage Hydro	Foster	22	21	22	22	21	6	5	23	23
Storage Hydro	Hills Creek	32	31	31	33	34	28	34	34	34
Storage Hydro	Lookout Point	87	80	78	91	118	119	106	101	90
Storage Hydro	Lost Creek	54	55	40	55	55	55	55	55	55
		15,798	15,968	16,366	15,886	15,959	13,535	13,624	13,800	14,576

Run of River and VER Resources

- **Definition:**
 - Run-of-river hydro (ROR) – Hydro resource with less than one hour of storage, not in coordination with another project.
 - Variable Energy Resource (VER) – wind and solar resources.
- **QCC Methodology:**
 - ELCC (Effective Load Carrying Capability) analysis of historical data performed by Program Operator (PO)
 - ELCC will be evaluated by month and by zone. ROR and VER resource zones to be defined based on climate/fuel supply (not transmission)
- **Submitted Data:**
 - Project details, such as: name, fuel type, host BA, ownership (or contracted Percentage), state, and county, summer and winter maximum capacity
 - ROR: 12 Federally owned or under contract, 11 Load Following customer dedicated resources
 - VER: Wind - 5 resources (2 Federal contract, 3 LF customer dedicated), Solar – 3 LF customer resources

Run of River (ROR) Resources - QCC

Draft Results

Resource Type	Project	Winter					Summer			
		Nov	Dec	Jan	Feb	Mar	Jun	Jul	Aug	Sep
Independent Hydro										
ROR	Anderson Ranch	12	14	14	15	14	12	11	8	8
ROR	Big Cliff	6	7	7	8	7	6	6	4	4
ROR	Black Canyon	3	4	5	6	8	9	9	8	5
ROR	Boise Diversion	0	0	0	0	0	3	2	2	2
ROR	Chandler	3	2	7	9	12	2	2	3	2
ROR	Cowlitz Falls	27	29	28	25	22	24	17	8	5
ROR	Dexter	5	6	6	6	6	5	4	3	3
ROR	Green Springs	2	5	6	8	7	10	11	9	8
ROR	Minidoka	1	4	3	4	7	19	15	16	15
ROR	Palisades	26	39	40	44	75	103	106	98	73
ROR	Roza	4	4	4	7	11	8	6	8	6
ROR	Dworshak/Clearwater Small Hydro	1.7	1.8	1.9	2.0	1.9	1.6	1.4	1.1	1.1
		93	115	123	135	171	201	191	169	132
Load Following customer dedicated resources										
ROR	Aggregate Total - Dedicated ROR	24	26	19	24	34	44	44	39	34
ROR Total		117	141	142	158	206	245	235	208	166

Variable Energy Resources (VER) - QCC

Draft Results

Resource Type	Project	Winter					Summer			
		Nov	Dec	Jan	Feb	Mar	Jun	Jul	Aug	Sep
VERS										
Wind	Stateline Wind Project	19.2	26.9	17.9	19.8	10.3				
Load Following customer dedicated resources										
Wind	Aggregate Total - Dedicated Wind	8	10	8	15	10				
Solar	Aggregate Total - Dedicated Solar	0	0	0	0	0				
VERS Total		27	37	26	35	21				

Thermal Resources

- **Definition:**
 - Thermal resources – Generating resources, such as those fueled by coal or natural gas, in which heat energy is converted to electricity.
- **QCC Methodology:**
 - Unforced capacity (UCAP) analysis of historical data performed by Program Operator (PO)
 - Using six years of historical data (removing the worst performing year) for each season.
- **Submitted Data:**
 - Project details, such as: name, fuel type, host BA, ownership (or contracted Percentage), state, and county, summer and winter maximum capacity
 - 10 projects submitted (1 Federal, 9 LF customer resources)

Thermal Resources - QCC

Draft Results

Resource Type	Project	Winter					Summer			
		Nov	Dec	Jan	Feb	Mar	Jun	Jul	Aug	Sep
Thermal										
Thermal	Columbia Generating Station	1194	1194	1194	1194	1194	1125	1125	1125	1125
Load Following customer dedicated resources										
ROR	Aggregate Total - Dedicated Thermal	0	0	0	0	0	0	0	0	0
Thermal Total		1194	1194	1194	1194	1194	1125	1125	1125	1125

Total Resources - QCC

Draft Results

Project	Winter					Summer			
	Nov	Dec	Jan	Feb	Mar	Jun	Jul	Aug	Sep
Storage Hydro Total	15,798	15,968	16,366	15,886	15,959	13,535	13,624	13,800	14,576
ROR Total	117	141	142	158	206	245	235	208	166
VERS Total	27	37	26	35	21	-	-	-	-
Thermal Total	1,194	1,194	1,194	1,194	1,194	1,125	1,125	1,125	1,125
Total QCC	17,135	17,340	17,728	17,273	17,379	14,906	14,985	15,133	15,867



Transmission

Eddie Elizeh



Scope of discussion

- **WRAP Initiative: Principles for Deliverability**
 - WRAP Transmission Requirements for the Forward Showing Program
 - WRAP Transmission Requirements for the Operations Program
- **WRAP Participants' Use of Transmission Service**

No Impact to BPA Transmission Policies

- No changes are expected:
 - To BPA's OATT or Business Practices
 - To how Customers acquire transmission service;
 - To how BPA operates and manage its transmission system; or
 - To scheduling and tagging requirements, or curtailment procedures.

WRAP Deliverability Requirement – Forward Showing Program

- Participants need to show firm transmission service rights, from source of generation to load, for 75% or more of the participant's Forward Showing Capacity Requirement
 - The Forward Showing Capacity Requirement will be established in the WRAP Tariff
- Firm transmission service rights are defined as meeting NERC priority 6 or 7 (NT, 7F, 6NN, and CF)
- If firm transmission service rights are not available on a specific path, the participant can request an exception from WPP, if it meets one of the following categories:
 - Enduring Constraints
 - Future Firm ATC Expected
 - Outages and Derates
 - Counterflow of a WRAP resource
- Refer to the WPP website for more information on the WRAP deliverability requirements

WRAP Transmission Requirements – Operations Time Horizon

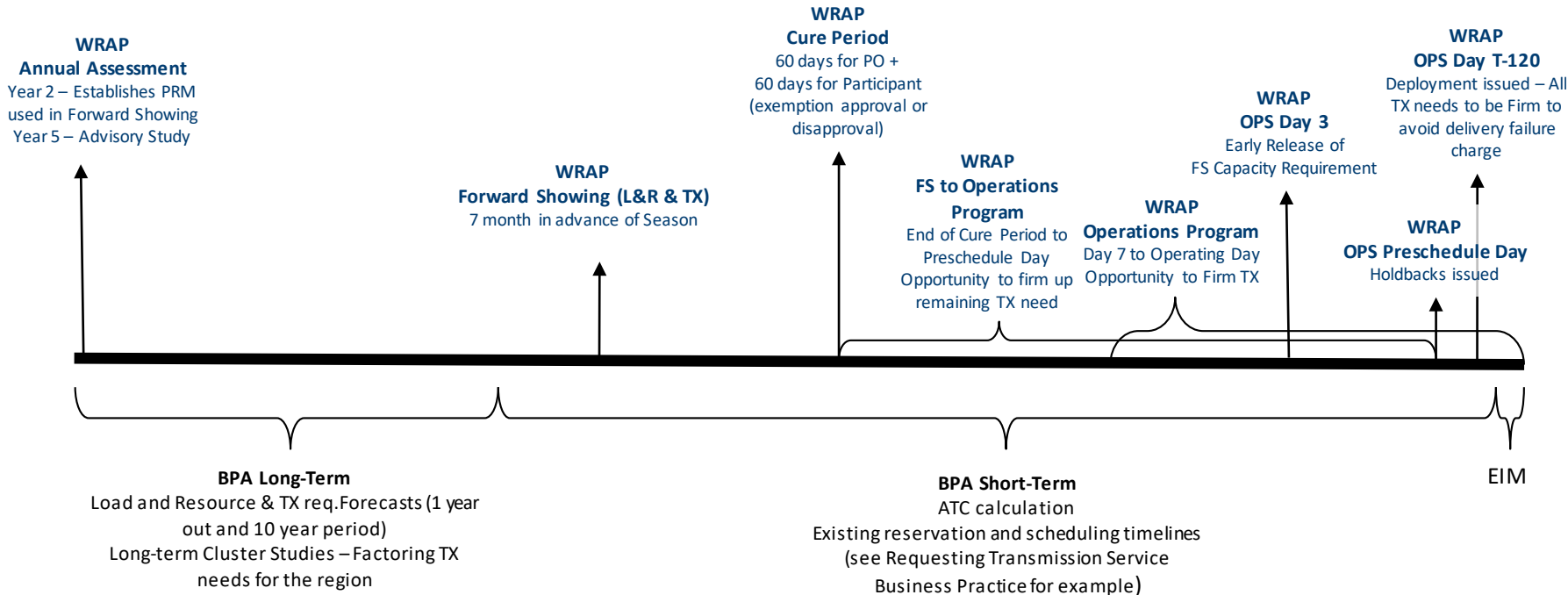
- WPP on rolling 7 days will evaluate and determine the participant's sharing calculation (positive or negative)
 - Positive and Negative sharing position is based on the comparison of current load forecast, forced outages, and ROR and VER performance compared to the data submitted at Forward Showing.
- Program requires all transmission reservations from generation source to sink where load is being served to be 100% Firm for operational time horizon
 - There will not be any review or checking of the participants' transmission rights by the WPP, during the Operations Period, only an after-the-fact analysis of a delivery failure.
 - If there is a curtailment and load has been interrupted and other participants have been impacted, the WPP may conduct an investigation after-the-fact to see the cause and can assess delivery failure charges if firm transmission was not used.
 - Details of after-the-fact analysis protocols, processes, and mechanics have not been outlined. They will be defined in the Business Practice Manual (BPM) which will be established pursuant to the WRAP Tariff.

WRAP Participants' Use of Transmission Service

BPA Customer Type	Participation in WRAP (FS)	WRAP Requirements (Ops Horizon)
NT - Load Following (LF) Customers	<ul style="list-style-type: none"> BPA will participate on behalf of all LF customers for the FS data submittal. 	<ul style="list-style-type: none"> BPA will participate on behalf of all LF customers in the Operating time horizon.
NT – All other Customers	<ul style="list-style-type: none"> WRAP Participant submits FS workbook to program. As requested, BPA can support WRAP Participant with collection of required transmission data for submission. 	<ul style="list-style-type: none"> Participant need to use PTP TX to move their energy deployment to the Centroid/Hub or directly to a participant that is deficit. Could request 6NN from Centroid/Hub, or another participant, to their load if they are receiving an energy deployment. If 6NN is unavailable, than PTP must be used. Must meet the WRAP data submittal and operational protocols requirements.
PTP – includes BPA Slice, PTP service to load, or transfer generation source through BPA	<ul style="list-style-type: none"> WRAP Participant submits FS workbook to program. As requested, BPA can support WRAP Participant with collection of required transmission data for submission. 	<ul style="list-style-type: none"> Participant uses PTP TX to move their energy deployment to the Centroid/Hub or from the Centroid/Hub if the participant is receiving an energy deployment. In addition, a participant may deliver or receive their energy deployment with another participant using PTP TX. Must meet the WRAP data submittal and operational protocols requirements.

Timeline

Summer Season (Starts June 1): Forward Showing data submittal deadline is Oct 31
Winter Season (Starts Nov 1): Forward Showing data submittal deadline is Mar 31



BREAK



NLSL and AHWM Unspecified Resources

Steve Bellcoff
Emily Traetow
Tim Johnson



NLSL & Unspecified Resources with WRAP

If BPA decides to join the binding phase of the Western Resource Adequacy Program (WRAP), it will be obligated to comply and meet the requirements of the program.

- Participants must submit their Total Retail load (TRL) and all physical resources of power used to serve that load.

For Resource Adequacy, BPA is the Load Responsible Entity for its Regional Dialogue Load Following (LF) Customers' loads (but not for Slice or Block loads).

Background

- WRAP, Regional Dialogue contracts, and BPA's statutes:
- **BPA's statutes** guide what load BPA can and cannot serve, and what it has responsibility to serve.
 - **Regional Dialogue contracts** spell out the specific elections and loads that customers have placed on Bonneville to serve.
 - **WRAP** defines load as TRL of the Load Responsible Entity (LRE).

Background

The obligation to supply resources/power to serve load is clearly stated in BPA's existing RD contract.

- There are no NLSLs BPA is obligated to serve. Any non-federal resources (specified or unspecified) used by the customer to supply a portion of its load is the responsibility of the customer.
- Customers are responsible for resource to meet NLSL loads and for associated transmission.
- Customers are responsible for non-federal resources (including unspecified resources) and associated transmission.
- Delivery failure of customer resources is subject to UAI charges.

Regional Dialogue vs WRAP

- Under Regional Dialogue, BPA gave its customers the contractual right to serve load with “unspecified resource amounts.” A customer can serve NLSL or Above High Water Mark (AHWM) load with unspecified resources and hold the full responsibility of bringing the megawatts to meet those loads.
- Under Regional Dialogue contracts, BPA’s customers serving load with unspecified resources are not required to provide BPA with information regarding a source of power; in general, beyond a megawatt number BPA does not know its source until it is scheduled/tagged for delivery at preschedule.
- Under WRAP, in order for resources to be accredited and have a Qualifying Capacity Contribution (QCC) in the program, the resources serving load must be physical resources, or the power supply contracts must be traceable to a physical resource. This information is provided to the program during the Forward Showing (FS) timeframe which is 7 months in advance of a season.

Regional Dialogue vs WRAP

- As a participant in WRAP, BPA will be required to show resource QCC values equal to the TRL of its load following customers.
- BPA will count its LF customers non-federal resources as part of that resource portfolio available to serve load, but only physical resources or contract purchases with an attestation that it is backed up by a physical resource will count towards meeting that QCC requirement.
- Forward Showing (FS) evaluation is 7 months in advance of each season.
- This 7 month in advance FS timeframe and the customers' right to use unspecified resources do not align.

WRAP Participation – Excluding Load

- Under the WRAP participation model, a single LRE may bring into the program one or multiple loads for which it has responsibility or obligations.
- LREs will be required to show the WPP the Total Retail Loads for which they are responsible (all loads within the Western Interconnect for which they are the LSE or the exclusive wholesale electricity provider to the LSE).
- LREs may not be able to participate in the program on behalf of all load for which they are responsible or may have loads for which they are not the LSE; therefore, WRAP provides a load exclusion process to enable such LREs to participate with the load for which they are able.

WRAP Participation – Excluding Load – Exclusion Process

- The WRAP developed an exclusion process which is intended for discrete loads served by disparate LSEs and/or in disparate balancing authority areas (BAAs), for example: third-party, self-supply, consumer choice. Loads served by a single LSE may not be partially excluded.
- Importantly, the load exclusion process does not leave load participation (or exclusion) to the discretion of the LRE. The types of load that may seek exclusion are likely existing large industrial loads served via Direct Access and NLSLs. Such an entity will complete an attestation requesting exclusion from the program and indicating a mutual understanding (between LRE and customer).
- Exclusion directly applies to BPA's Load Following Customers NLSL:
 - Through this exclusion and the request of LF customers with NLSL, load may be excluded from the WRAP.
 - Exclusion does not create a path for the exclusion of unspecified resources serving AHWM load.

Solution Needed

- BPA will honor our Regional Dialogue contractual obligations, and allow customers to continue to utilize unspecified resources, while encouraging them to move towards resources that meet the requirements of resource adequacy and the WRAP.
- BPA recognizes that Regional Dialogue Contracts expire in 2028. A decision to fully join WRAP would introduce several issues that may need to be addressed in future product offerings through the Provider of Choice process. There may need to be new planning requirements around the accounting and application of non-federal resources, both specified and unspecified.

Solution Concept - NLSL (not served through BPA contract) *

A white rectangular stamp with a blue border and rounded corners, tilted slightly to the right. The word "Proposal" is written in blue, sans-serif font inside the stamp.

- *Election options:*
 1. Customer has option to exclude the NLSL through WRAP Load Exclusion provision and to request and sign attestation excluding each specific NLSL.
 2. Customer submits documentation for known/existing resources to serve unspecified resource obligations. Submitted resource QCC value must be equal to or greater than NLSL.
 3. Customer with NLSL that fails to elect option 1 or 2 above will receive a charge from BPA (to be developed).

**Proposed concept, further development may be required – feedback from customers welcomed.*

Solution Concept - AHWM Unspecified Resources

Proposal

- *Election options:*
 1. Customer submits documentation for known/existing resources being used by the customer to meet AHWM unspecified resource obligations.
 - Submitted resource QCC value must be equal to or greater than the elected unspecified resource amounts and must be submitted prior to the forward showing time period (7-months in advance of the season.)
 - In the rate case, BPA will propose a credit for customers that use physical resources to meet their non-federal resource obligations for service to AHWM Load (specified and unspecified resources).
 2. Status quo. Customer continues to use unspecified resource amounts to serve its AHWM Load and does not provide any resource documentation to BPA. The customer does not receive the credit discussed above for such unspecified resource amounts.

**Proposed concept, further development may be required – feedback from customers welcomed.*

Consideration of Customer Feedback

Mai Truong
Eddie Elizeh
Ryan Egerdahl
Steve Bellcoff
Tim Johnson



Addressing Phase 3A Letter Commitments

- BPA is fulfilling its commitment to work with customers and stakeholders made in the Phase 3A Letter to the Region
- Managing a “WRAP Public Considerations” tracking spreadsheet (posted on the BPA Resource Adequacy webpage) to resolve the open questions and key considerations in order for BPA to make a well-informed decision on participation in Phase 3B


Considerations Tracking Update

- BPA will be addressing items identified for resolution at today's workshop and the April 13, 2022 workshop (ran out of time). Category themes:
 - Transmission
 - BPA Products and Services
 - Program Impacts
 - Legal
- Added to “WRAP Public Considerations” tracking spreadsheet in response to comments received (see Appendix)
 - 6 items following the January 27, 2022 workshop
 - 4 items following the April 13, 2022 workshop

Q/C#: 70 – 75 (January), 76-79 (April)

Guide to Reading These Slides

Theme	BPA Response
<ul style="list-style-type: none">• High level or summarized themes BPA captured from comments/feedback.	<ul style="list-style-type: none">• BPA's response to themes or specific comments.• May have a single response for multiple comments.
<ul style="list-style-type: none">• May include specific comments as beneficial to the conversation.	



Indicates the specific comment IDs being addressed for the topic, as captured in the considerations tracking spreadsheet

Q/C#: 2, 3, 5, etc.

Guide to Reading These Slides

Considerations Tracking Sheet Example

ID#	Submitter	Topic/Theme	Question/Consideration
2 AMTC		Logistics	Proposed timing of 3B decision and implementation is to flesh out rate impacts/cost allocation
3 AMTC		Logistics	BPA should commit to potentially conducting a mini period prior to issuing a final decision on Phase 3B p All initial program costs and benefits should accrue ... may be the appropriate place in the near term.
5 NRC		Cost Allocation/Rates	LF customers only ... at 2024

Q/C#: 2, 3, 5, etc.

Transmission

Theme	BPA Response
<p>What type of reporting will be made available on the use of BPA's transmission related to the WRAP?</p>	<p>The WPP will not be issuing any reports in respect to utilization of transmission of the BPA or other Transmission Service Providers.</p>
<p>What impact will the seven month forward showing have on the reservation and scheduling deadlines that the region currently relies upon?</p>	<ul style="list-style-type: none"> • In today's (June 13, 2022) presentation, "Transmission," BPA explained that there are no changes expected to BPA's Tariff and Business Practices which include the requirements for reserving and scheduling transmission. • The WRAP was designed to work within today's Open Access framework. • See also Transmission Deliverability Key Principle "d" and Question #8 of the WRAP Transmission Frequently Asked Questions document for more information.
<p>What will the process be for entities redirecting their existing transmission rights to the centroid?</p>	

Transmission

Theme	BPA Response
<p>Will BPA’s NT customers be allowed to identify the centroid point of receipt as a Designated Network Resource for purposes of receiving RA program provided energy when they are deficient? What if, as is likely, an NT customer cannot identify the control area(s) from which such power will originate at the time of the attempted designation (which was the downfall of BPA’s short-lived seller’s choice option for NT customers)? Does the answer to this question depend on whether the transmission customer is also a BPA power customer and/or, specifically, a load following or slice/block customer of BPA?</p>	<ul style="list-style-type: none"> • No. As BPA explained in today’s (June 13, 2022) presentation on “Transmission,” NT customers who are participating in WRAP and are deficit may use 6NN from the Centroid/Hub to their load to receive energy deployment and PTP customers may use PTP transmission to move their energy deployment from the Centroid/Hub or directly from another Participant. • Additionally, BPA also clarified in today’s (June 13, 2022) presentation that there are no expected changes/impacts to BPA’s Tariff, including current policies for designating network resources, and customers would continue to follow the same processes and adhere to the same requirements that exist today under BPA’s Tariff.
<p>Will BPA’s NT customers participating in the RA program be able to identify the centroid point of delivery as a Designated Network Load for purposes of meeting its energy delivery obligations under the program when it is surplus and another program participant is deficient? Or, will such a customer be required to use point-to-point transmission for such purposes?</p>	<p>No, as explained in today’s (June 13, 2022) presentation, “Transmission,” an NT customer who is participating in WRAP must use PTP to deliver surplus under the program. It is important to note that this is consistent with BPA’s policies for NT service under BPA’s Tariff.</p>

Transmission

Theme	BPA Response
<p>Does BPA expect to have short-term preemption and competition fully implemented (including in the hourly and daily timeframes) prior to the first operational season under the program? Will BPA respect and continue to implement such preemption rights during RA sharing events once the program goes live?</p>	<ul style="list-style-type: none"> • BPA is phasing its implementation of preemption and competition (PCM). To date, BPA has implemented PCM for all short-term products except hourly, including redirects. BPA is currently working to implement PCM for hourly firm products and it will be implemented by WRAP’s first operational season. • BPA is not expecting any changes to BPA’s Tariff or Business Practices due to WRAP – including the rules set forth for PCM. As a result, BPA is not planning on any unique exceptions for implementing PCM due to WRAP.
<p>How will new long-term transmission requests intended to support the program be studied since they would be going to Mid-C (given current restrictions on hubbing requests in long-term studies)?</p>	<ul style="list-style-type: none"> • In today’s (June 13, 2022) presentation, “Transmission,” BPA explained that there are no changes expected to BPA’s Tariff and Business Practices, including our NT policies and procedures. • Our understanding of WRAP is that participants’ resources must deliver to load, but the Mid-C hub would be used to enable transfers between deficient and surplus participants in the program. Participants may use short-term firm PTP to the hub and short-term firm PTP or 6NN to deliver from the hub.

Transmission

Theme	BPA Response
<p>Will the centroid be used for all transmission rights used to demonstrate adequacy under the program? Or only for generation that is made available to others during the operational showing period?</p>	<ul style="list-style-type: none"> • The centroid hub is only designed for delivery of the holdback obligation (participant surplus being delivered to meet another participant’s deficit) – for the ease of scheduling and tagging of delivery. So, participants can continue under bilateral agreements today to facilitate that delivery. • The WRAP deliverability requirements for Forward Showing do not require the use of a centroid such as the Mid-C. A participant must only meet the demonstration requirements, which BPA described in today’s (June 13, 2022) presentation on “Transmission,” a participant needs to show firm service (NERC priority 6 or higher) for 75% of the Forward Showing Capacity Requirement. • Additionally, participants must have 100% firm service (min. NERC priority 6) of their resources in the operations time horizon. There is no before-the-fact check during the Operations period, only an after the fact analysis of a delivery failure. Participants may be subject to a delivery failure charge for not meeting the forward showing demonstration requirement or for failure to deliver in the operational time period.

Q/C#: 68

BPA Products and Services

Theme	BPA Response
<p>Will BPA be providing new products to help facilitate the program?</p>	<ul style="list-style-type: none"> • Customers are encouraged to interface with the marketplace, including contacting BPA’s Trading Desk about power availability and pricing for products to facilitate WRAP participation. BPA may offer new product offerings, such as the recent RFO, and will continue to monitor the market, specific requests, and its inventory as a way to interface in the current marketplace. • At this time, BPA is not considering new Regional Dialogue product offerings to facilitate WRAP participation. BPA recognizes that Regional Dialogue Contracts expire in 2028. A decision to fully join WRAP would introduce issues that may need to be addressed in future product offerings through the Provider of Choice process. There may need to be new planning requirements around the accounting and application of non-federal resources, both specified and unspecified.

Program Impacts

Theme	BPA Response
<p>IPPs should be allowed to meet the requirements for the NLSLs they serve if a COU has contracted with them to meet the NLSL energy needs, rather than service from BPA at an NR Rate.</p>	<p>BPA agrees. Under WRAP, in order for a resource to be accredited and have a QCC in the program, the resource serving load must be a physical resource, or the power supply contract must be traceable to a physical resource (or fleet) and be provided to the program during the FS timeframe (7 months in advance of a season). BPA’s proposed solution concept for treatment of NLSL reflects this ability for customers to serve load with a resource of choice, by creating a data submittal option, or via a load exclusion process.</p>
<p>Regional Dialogue contract conflict with the WRAP Forward Showing requirements because known sources do not need to be identified until pre-schedule. Concerned WRAP will create potential capacity costs that will get passed to the NLSL.</p>	<ul style="list-style-type: none"> • In today’s (June 13, 2022) presentation, “NLSL and AHWM Unspecified Resources,” BPA described the conflicting timing difference between Regional Dialogue contracts (at preschedule) and WRAP participation (7 months in advance of a season). BPA shared solution concept proposals to address these conflicting requirements while honoring the Regional Dialogue contracts. • BPA’s NLSL solution concept, allows for the option to exclude the NLSL load, thereby removing any capacity costs directed by BPA towards the customer.

April Workshop Items

Program Impacts

Theme	BPA Response
<p>7-month deadline for FS may not be able to accommodate the variability of hydro availability</p>	<ul style="list-style-type: none">• WRAP’s qualified capacity contribution methodology for storage hydro was specifically designed to look across the last 10 years of history (as a wide variety of water conditions) and evaluate the actual generation as well as the fuel supply in storage. Then the methodology takes into account the unique characteristics of the specific hydro facility and its current operating requirements, to establish a single capacity value. Capacity unlike energy has a limited duration and capability that needs to be accounted for. When the program moves to an energy metric, a methodology that specifically accounts for some level of firm energy will be required.• See sections “2.5 Qualified Capacity Contribution of Resources” and “Appendix D- Qualified Capacity Contribution modeling” in the WRAP Detailed Design Document for additional information.

Program Impacts

Theme	BPA Response
<p>What happens if there simply is not sufficient physical capacity in the region to meet the forward showing obligations of all RA participants when the binding phase of the RA program begins? Would the RA program still impose penalties even though it is not possible to comply? Would BPA still pay them?</p>	<p>“WRAP must be workable for all participants and not intended to set up participants to fail. The CONE charge is adopted only when:</p> <ul style="list-style-type: none"> • participants can secure supply in a competitive environment to pass the Forward Showing • there are mechanisms to ensure adequate liquidity and ability to contract for capacity in the 8- 10 month ahead timeframe • there has been an assessment of capacity availability prior to the binding season to ensure that all participants can procure enough capacity to pass the Forward Showing <p>The program must be workable for all participants and as such is not intended to set up any participant for failure during the initial binding seasons. The CONE penalty is designed to incentivize new build when there isn't sufficient capacity in the market.” To this point, WRAP is working to design a Transition Plan that would verify these things and others, as the program becomes binding, in order for penalties or charges to be applied. See WRAP CONE Proposal for more information.</p> <p>BPA forecasts the availability and cost of power (energy and/or capacity) from short term programs, such as WRAP or markets, and engages in resource planning regarding the long-term acquisition of a resource(s) having the capability to meet the Administrator's expected obligations. Once the criteria above has been met and BPA fails to meet the Forward Showing Capacity Requirement, then BPA may be assessed a CONE charge.</p>

Program Impacts

Theme	BPA Response
<p>How do the reserves that BPA is currently holding out for its products compare to the Planning Reserve Margin that is required under the RA program? Will this difference result in any changes to the amount of capacity that BPA holds as reserves?</p>	<ul style="list-style-type: none"> • Balancing and contingency reserves required of balancing authorities are different from the Planning Reserve Margin (PRM) required for participants in WRAP. • Participation in WRAP does not change the amount of capacity that the BPA BAA holds for both balancing and contingency reserves. • As a BA, BPA must ensure it has sufficient balancing reserve and contingency reserve capacity to supply Ancillary and Control Area Services to load and generators located in its BAA. Subject to multiple variables these reserves maintain load-resource balance at all times and support reliable operations of the transmission system. The amount of capacity for providing balancing reserves, known as Generation Inputs, is forecast and set in BPA rate setting proceedings. The amount of capacity for contingency reserves is defined by NERC standards (3% of online generation plus 3% of load). • In the WRAP, the PRM represents the amount of dependable capacity needed beyond the P50 load forecast to meet unforeseen periods of high demand, unexpected resource outages, and other unexpected conditions. The WRAP also assumes contingency reserves are being held by all participants in the region and then adjusts the PRM to account for individual participant's contingency reserves. • See sections "2.2.2 Planning Reserve Margin," "Appendix B - B.7 PRM Calculation," and Appendix C – C.1 Impact of Contingency Reserves on PRM" in the WRAP Detailed Design Document for additional information on the planning reserve margin.

Program Impacts

Theme	BPA Response
<p>Wants to explore with BPA “what would happen today” vs. “in the RA program” under various scenarios</p>	<p>The April 13, 2022 presentation “BPA Planning with WRAP” builds off of the January 27, 2022 presentation to explain how the planning process may be impacted by WRAP. Additionally, the April 13, 2022 presentation, “Planning Scenarios and Preference Rights,” includes scenarios submitted by customers to illustrate how BPA planning may or may not be impacted by WRAP.</p>
<p>Needs common understanding of how BPA plans on a forward basis to meet its peak loads today, including the reserve margin BPA applies to the forecasted peaks. (baseline to allow customers to judge if RA program is an improvement over BPA status quo)</p>	
<p>Requests that BPA explore through a public forum the relationship between program-qualified capacity and the capacity needed to meet its P10 Heavy Load Hour planning criteria</p>	<ul style="list-style-type: none"> • In the April 13, 2022 presentation “BPA Planning with WRAP”, BPA shared that based on the indicative PRMs from Phase 2B, BPA’s PRMs (for summer and winter) are within today’s range of energy uncertainty that is planned for in both hydro and loads. • As an energy constrained hydro system, historically the P10 heavy load hour metric is BPA’s constraining point. • Potentially, BPA may add a capacity metric to its planning processes.

Q/C#: 36, 45, 70

Program Impacts

Theme	BPA Response
<p>Assuming BPA does become a load responsible entity and does not plan to relax its existing planning criteria, how much WRAP qualified capacity does BPA anticipate it will have in excess of program requirements that it will not need to meet its other planning criteria?</p>	<ul style="list-style-type: none"> As described in “Scenario A – LT Planning (Preference)” in the “Planning Scenarios and Preference Rights” presentation and in the “BPA Planning with WRAP” presentation for the April 13, 2022 workshop, a decision to join the WRAP would not change the way in which BPA conducts marketing activities. BPA would continue to assure Preference is met through standard practices. Any changes to the methods used to assure Preference would be outside of WRAP. WRAP qualified capacity contribution and BPA’s energy limited resource portfolio do not create an alignment of WRAP surplus being BPA surplus. BPA will continue to use planning methods based on variability of hydro and load along with risk methodologies to establish marketing practices. Surplus in WRAP does not define BPA’s inventory position.
<p>How will BPA’s methodology and timeline(s) for making surplus capacity and energy available first to preference customers interact with the forward showing and operational timelines and requirements under the program?</p>	

Program Impacts

Theme	BPA Response
<p>Would BPA (and its load-following customers) be better off if BPA simply sold excess capacity to others in the RA program without being a load-responsible entity itself? Would this be a better business case for BPA given that (i) it does not plan on changing its own planning criteria and (ii) it would allow BPA to avoid the risk of penalties but still reap capacity sales revenues?</p>	<p>This is a two-part response.</p> <ul style="list-style-type: none"> • First, WRAP is a potential resource for BPA to meet its long-term sales contract obligations to supply firm power to its regional power customers. WRAP would become another tool in the “tool box.” • Second, while WRAP is not a market, it does provide the potential to sell capacity and energy to WRAP participants in need, if BPA determines it has surplus available.
<p>Assuming BPA does not become a load responsible entity in the WRAP, how much excess capacity could BPA potentially sell to other load responsible entities in the WRAP while still meeting its current planning criteria?</p>	<p>Additionally, participation in WRAP does not create incremental MWs to the FCRPS. BPA still has the “same MW amount.” One potential impact to surplus sales is moving when BPA makes the sale – earlier or later.</p> <p>BPA’s inventory position would not be established by a WRAP metric, BPA has an energy constrained system, based on fuel supply (water). BPA must understand the current or expected, fuel constraints in order to evaluate its marketing situation.</p>

Q/C#: 47, 71

Program Impacts

Theme	BPA Response
<p>How will the requirement to “hold out” capacity for others in the program impact BPA’s ability to make secondary sales? How is this mitigated through payments from the WRAP?</p>	<ul style="list-style-type: none"> • At this time, it is premature to answer the exact impact (positive or negative) to secondary sales until the binding program is up and running. BPA believes over time the program will provide assurance to the region that reliability risks are lower. WRAP does not create new energy or capacity; fuel supply (water) establishes the resource capability BPA has available to meet load and/or market as surplus. • In the April 13, 2022 presentations “BPA Planning with Wrap” and “Planning Scenarios and Preference Rights” is the description of how the Forward Showing Capacity Requirement transitions into any holdbacks on the Preschedule Day, how holdbacks transition to energy deployments in the Operating Day, and how and when release of those requirements happen. • By joining the WRAP, BPA would be obligated to assure the Forward Showing Capacity Requirement is available at Preschedule, to serve BPA’s program load, any change in variable energy resource, and provide help to other program participants. After the Preschedule Day, all capacity in the program beyond BPA’s need would be compensated for (i.e., holdback or energy deployment). WRAP has been designed on a concept that the program would be activated through a Sharing Event between 12 and 20 times per year. Anything beyond meeting the program’s Forward Showing Capacity Requirement is considered Surplus to the program, BPA would be free to use its Surplus in any way it wants, such as, storing for future, taking additional outages, or for marketing opportunities.
<p>Assuming BPA does become a load responsible entity in the WRAP, does BPA plan to relax its current planning criteria to reduce capacity planning charges or create excess capacity to sell to other load responsible entities in the WRAP?</p>	
<p>How much can BPA reliably relax its current planning criteria and how much excess capacity would this create for BPA to sell (subject to its preference obligations) to load responsible entities in the WRAP? How much net revenue would result?</p>	

Q/C#: 19, 72, 73

Program Impacts

Theme	WRAP Response
<p>The RA program’s PRM is based on a coincident peak, yet the program then applies that PRM to each individual entity’s non-coincident peak. Is this a standard design among similar programs? If not, does it reduce the purported benefits of a region-wide RA construct?</p>	<ul style="list-style-type: none"> • The RA program models a total capacity need for the footprint to meet the 1-in-10 year reliability standard (incorporating load and supply diversity), ultimately this can be broken down into the P50 peak load forecast times the PRM. • The PRM is calculated based on a 1 day-in-10 year analysis for the coincidental peak load shape and peak. That calculation results in a total capacity need for the program. However in establishing the PRM (%) target, the capacity needed is allocated by the non-coincident peak – by taking that total capacity need and dividing by the sum of the participant’s non-coincident peak rather than the coincidental peak. • Therefore the PRM (%) applied to each entities' non-coincident P50 peak load forecast is already adjusted to result in the same total aggregate capacity requirement across the footprint that was determined in the original 1 day-in-10 year analysis. This methodology ensures we equitably allocate out the capacity requirement for the footprint to all participants, while maintaining the same total capacity requirement for the footprint that was determined in the modelling. • This approach maintains and unlocks diversity from the full footprint and established the regional capacity requirement needed to meet the reliability metric (which is driven by the most challenging hours based on a coincident "net peak" perspective). This is all done in a manner that achieves an equitable allocation to all participants, while maintaining the diversity benefit of the large footprint of participants. • Other programs use a wide variety of approaches that take into account by Coincidental and Non-Coincidental peaks and different places in calculations. But all programs include some relationship between them in order to maximize diversity and allocate it to individual participants.

Theme

BPA Response

How will BPA respect statutory preference rights in both the forward and operational timeframes while simultaneously meeting its commitments in the program?

- BPA has updated the previous response to this item (on Slide 16 from the [January 27, 2022 workshop presentation](#)) on the process for considering preference:
- BPA does not need to change its current process to statutory preference rights. BPA is obligated to provide notice to preference customers regarding proposed offers to sell available surplus capacity or energy. BPA's notice obligation to preference customers will not be affected by participation in the Western Resource Adequacy Program. BPA will provide notice to preference customers if BPA determines that it has surplus capacity or energy that can be offered for sale, as it does today. BPA meets its requirements in a three-part manner:
 1. Posting a Daily Notice on its website and mailing an Annual Notice. These notices alert PNW customers to contact BPA to find out what is available and request a purchase.
 2. By selling a standardized product. This allows PNW customers to know the basic "terms" of the contracts that BPA sells because BPA's product is standard HLH or LLH energy or capacity for each hour. If a product is not standard, BPA includes the non-standard terms in the Annual Notice or issued RFO.
 3. Regional Surplus letter/Letter of Intent. This notifies preference customers that BPA will be looking to forward market power over a determined time horizon and to contact BPA to find out what is available and request a purchase.
- If BPA is determined to have surplus capacity and there is a competing request for that surplus between a preference entity and a non-preference entity, BPA will supply such capacity to the preference entity in accordance with section 4(a) of the Bonneville Project Act. The Western Resource Adequacy Program itself does not establish offers of power between buyers and sellers. Similarly, regional preference will be adhered to if there is a competing request between a regional preference customer, which can be a public body customer, investor or-owned utility customer, or a Direct Service Industrial customer, and a non-regional entity.
- For additional information, see "Scenario A – LT Planning (Preference)" in the "Planning Scenarios and Preference Rights" presentation and in the "BPA Planning with WRAP" presentation for from the [April 13, 2022 workshop](#).

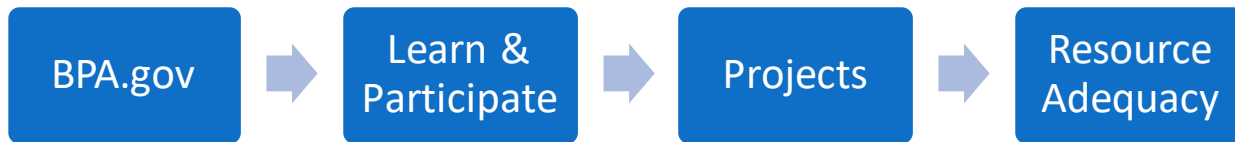
Legal

Theme	BPA Response
<p>What specific contract language provides BPA the authority to participate in the RA program?</p>	<p>BPA's authority to participate does not arise from its power sales contract. BPA's authority to participate in the WRAP arises under section 11(b)(6)(i) of the Transmission System Act of 1974, which grants the Administrator authority to acquire power on a short-term basis (5 years and less). One way of looking at the WRAP is to consider it as a tool for helping to assure the Administrator has an adequate and reliable supply of power to meet his firm contractual obligations.</p>
<p>How will BPA preserve the rights and obligations of both BPA and its customers under the Regional Dialogue contracts when such rights and/or obligations may conflict with the requirements of the RA program?</p>	<p>BPA will continue to meet its existing contractual obligations. Similarly, BPA expects customers purchasing federal power under the existing Regional Dialogue power sales contracts to meet their obligations and to exercise attendant rights. BPA does not believe WRAP will create impediments or barriers affecting BPA or its customers' contractual performance.</p>

QUESTIONS?

Next Steps

- Please submit your feedback @ techforum@bpa.gov by June 27, 2022.
- Next workshop is on July 26, 2022.
- More information on BPA's participation in the Western Resource Adequacy Program can be found on the [BPA RA webpage](#):





Appendix



Considerations Tracker Update

Items Added to the Considerations Tracker in Response to Comments Received Following the January 27, 2022 Workshop

Q/C#	Question/Consideration (May be summarized)
70	Requests that BPA explore through a public forum the relationship between program-qualified capacity and the capacity needed to meet its P10 Heavy Load Hour planning criteria
71	Assuming BPA does not become a load responsible entity in the WRAP, how much excess capacity could BPA potentially sell to other load responsible entities in the WRAP while still meeting its current planning criteria?
72	Assuming BPA does become a load responsible entity in the WRAP, does BPA plan to relax its current planning criteria to reduce capacity planning charges or create excess capacity to sell to other load responsible entities in the WRAP?
73	How much can BPA reliably relax its current planning criteria and how much excess capacity would this create for BPA to sell (subject to its preference obligations) to load responsible entities in the WRAP? How much net revenue would result?
74	Assuming BPA does become a load responsible entity and does not plan to relax its existing planning criteria, how much WRAP qualified capacity does BPA anticipate it will have in excess of program requirements that it will not need to meet its other planning criteria?
75	How will BPA's methodology and timeline(s) for making surplus capacity and energy available first to preference customers interact with the forward showing and operational timelines and requirements under the program?

Considerations Tracker Update

Items Added to the Considerations Tracker in Response to Comments Received Following the April 13, 2022 Workshop

Q/C#	Question/Consideration (May be summarized)
76	Regional Dialogue contract conflict with the WRAP Forward Showing requirements because known sources do not need to be identified until pre-schedule. Concerned WRAP will create potential capacity costs that will get passed to the NLSL.
77	Substantial concerns given the unknowns regarding unspecified resource amounts and NLSLs and projected timeline of Fall 2022 for Phase 3B decision.
78	Suggests standing up a working group comprised of BPA, utilities that serve NLSLs, AWEC and any other organization with similar interests, and individual end-use consumers to resolve NLSL issues with a report out on possible options to the broader stakeholder group.
79	Request for planning scenarios, similar to the April 13, 2022 workshop, for utilities serving above rate period high mark ("RHWM") loads and NLSLs with nonfederal, unspecified resource amounts to understand WRAP impacts on BPA's current processes.

List of Acronyms

Acronym	Description	Acronym	Description
AHWM	Above High Water Mark	NT	Network Integration Transmission Service
ATC	Available Transfer Capability	OATT	Open Access Transmission Tariff
BA	Balancing Authority	OPS	Operations
BAA	Balancing Authority Area	PCM	Preemption and Competition Module
BPM	Business Practice Manual	PO	Program Operator
CONE	Cost of New Entry	PRM	Planning Reserve Margin
ELCC	Effective Load Carrying Capability	PTP	Point-to-Point Transmission Service
EIM	Energy Imbalance Market	QCC	Qualifying Capacity Contribution
FERC	Federal Electric Regulatory Commission	RA	Resource Adequacy
FS	Forward Showing	RD	Regional Dialogue
HLH	Heavy Load Hour	RFO	Request for Offer
LLH	Light Load Hour	ROR	Run of River
L&R	Load and Resource	TRL	Total Retail Load
LF	Load Following	TX	Transmission
LOLE	Loss of Load Expectation	UAI	Unauthorized Increase Charge
LRE	Load Responsible Entity	UCAP	Unforced Capacity
LSE	Load Serving Entity	VER	Variable Energy Resource
NLSL	New Large Single Load	WPP	Western Power Pool
NERC	North American Electric Reliability Corporation	WRAP	Western Resource Adequacy Program